Small donations making a huge difference: Individual contributions can facilitate worldwide vaccination against COVID-19

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ABSTRACT

Background. The COVAX initiative provides low- and middle-income countries with equitable access and financial support to source vaccines against COVID-19. The initiative is primarily funded by wealthy governments but should also consider promoting individual donations.

Methods. We conducted a quota-representative study with 994 German participants to investigate individuals' donation intention and its relation to demographic variables as well as their willingness to get vaccinated against COVID-19.

Results. About one-third of participants expressed willingness to contribute to the initiative. Participants were more likely to donate when their household income was higher, and when their vaccination intention was stronger. For those willing to donate, the median donation was 20 EUR. While the donation amount increased with household income, stronger vaccination intentions and higher education led to lower donation amounts.

Conclusion. When projecting the results to the whole population, the initiative could raise hundreds of millions of euros in Germany alone. As people with stronger vaccination intentions are more willing to donate, vaccination centres could be an ideal setting for collecting donations.

INTRODUCTION

Recent findings suggest that vaccination against SARS-CoV2 prevents the transmission of COVID-19.[1] To achieve herd immunity and return to normality after months of restrictions, at least two-thirds of the population need to be vaccinated.[2] Wealthy countries have launched large-scale vaccination campaigns, with the UK leading the immunisation efforts in the European region. However, most of the global population will have to wait for years before being offered vaccination.[3] This delays the global ability to control the pandemic and increases the risk of mutations, which may not be covered by current vaccines. To reduce worldwide infections, deaths, and the risk of COVID-19 becoming endemic, everyone in every country needs to be offered vaccination as quickly as possible.[4]

The COVID-19 Vaccines Global Access (COVAX) initiative was set up to ensure equitable access to vaccines and to provide financial support to 92 low- and middle-income countries. COVAX aspires to cover 20% of the supported countries' populations with donor-funded vaccines.[5] As of mid-March 2021, the initiative has collected about 6.3 billion USD, with most donations coming from the governments of developed countries, such as Germany and the US.[6] While the initiative is a hallmark of global cooperation and could help protect healthcare workers and vulnerable individuals, its efforts are not sufficient to end the pandemic. Vaccinating two-thirds of the world's population will require many more vaccines and thus much more funding.[7] While wealthy nations may contribute more money in the future, COVAX should also consider focusing on contributions by individual citizens. So far, there have been only a few private donations. This may be due to several reasons: People may not know that individual donations to the initiative are possible or they may not know *how* to donate. People's willingness to donate may also be low. To shed light on this issue, we investigated people's willingness to donate and its correlates.

METHODS

The study was conducted on March 9 and 10, 2021, as part of a cross-sectional study series, COVID-19 Snapshot Monitoring (COSMO).[8] Participants were recruited from a non-probabilistic German sample ($N = 994$), quota-representative for age $\times$ gender and federal state. We excluded two individuals who indicated exceptionally high donations (500,000 and 100 million euros) for rather conservative estimates. This yielded a final sample of $n = 992$. Participants were 18 to 74 years old ($M = 45.08$, $SD = 15.35$) and included 493 males and 499 females. Most participants (56.5%) completed secondary education with university entrance qualifications. The distribution of household income was comparable to German census data (see online supplement), with 87 participants not providing an answer. All participants gave informed consent prior to data collection, and ethical clearance was obtained from the University of Erfurt's institutional review board (#20200302/20200501).

After demographic information was assessed, participants were asked how likely they would be to get vaccinated against COVID-19 if offered a chance to do so in the following week. They responded on a 7-point scale, ranging from *not at all likely to get vaccinated* to *definitely getting vaccinated*. Afterwards, participants read a short text about COVAX. They learned about the initiative's aim to provide vaccines to poorer countries, how it is funded by wealthier governments (e.g., by the European Union), and that further donations are needed to offer vaccinations to all people. Finally, participants were asked how much they would donate to COVAX if they had the chance to do so right now. Answers were collected using a text field, and participants were instructed to indicate 0 EUR if they did not want to donate.

RESULTS

About one-third of the participants ($n = 364$) expressed a desire to contribute to COVAX. Their intended donations ranged from 1 to 10,000 EUR ($M = 105.87$ EUR, $SD = 752.02$ EUR), with a median of 20 EUR. Most participants were willing to donate 10 EUR

(mode). In total, intended donations equalled 38,536 EUR. To investigate differences between those willing and those not willing to donate, a binary regression was performed (Table 1, left panel). Age, gender, education, income, and vaccination intentions were used as independent variables, and willingness (vs. unwillingness) to donate was used as a dependent measure. Two significant predictors emerged: participants were more likely to donate when their household income was higher, and when their vaccination intention was stronger. To investigate predictors of the projected donation amount, a zero-truncated poisson regression was employed using the same predictors (Table 1, right panel). Donations were higher when participants were younger, female, and had higher household income. Interestingly, higher education (having spent at least 10 years in school) and stronger vaccination intentions decreased the intended amount.

Table 1. Regression analyses results for willingness to donate and donation amount

	Willingness to donate		Donation amount	
	OR	95% CI	IRR	95% CI
(Constant)	0.06	0.03 – 0.14	466.11	435.26 – 499.14
Age	1.00	0.99 – 1.01	0.96	0.95 – 0.96
Gender: female (Baseline: male)	1.17	0.88 – 1.56	2.25	2.20 – 2.30
Education: at least 10 years without university entrance qualification (Baseline: up to 9 years)	1.11	0.65 – 1.88	0.78	0.75 – 0.82
Education: at least 10 years with university entrance qualification (Baseline: up to 9 years)	1.53	0.92 – 2.57	0.44	0.42 – 0.46
Household net income	1.20	1.10 – 1.30	1.27	1.27 – 1.28
Vaccination intention	1.30	1.20 – 1.40	0.90	0.89 – 0.90

Note: OR refer to odd ratios and IRR to incidence rate ratios, respectively. In both cases, values > 1 indicate positive impact of independent variables, values < 1 indicate negative relationships. Bold values are significant with $p < .05$.

DISCUSSION

The results indicate that about one-third of the German population is willing to donate to vaccination efforts against COVID-19. People with higher household incomes and stronger vaccination intentions are more likely to donate, reflecting two important requirements for donations: being able to dispense money and understanding vaccination as a safe and effective means of protecting against the disease. The intended donation amount increased with household income too. However, participants with stronger vaccination intentions and better education were less likely to donate larger sums. This finding may reflect calculations about higher donations increasing the buying power of the COVAX initiative, thus increasing competition about scarce vaccines and delaying vaccination programs in wealthy countries such as Germany. Once vaccine shortages dissolve, the effects of education and vaccination intention may disappear, too.

Even when considering a conservative donation estimate of 10 EUR for those willing to vaccinate, the overall contribution of the German population to the COVAX initiative could easily surpass 200 million EUR (calculation based on 20 million adults between 18 and 74 years). This could be further increased by campaigns emphasising the prosocial and individual benefits of donations, as previous research has shown that empathy increases donations.[9] When individuals learn that (a) rapid and large-scale vaccination in low- and middle-income countries is far from guaranteed due to budgetary gaps and (b) donations serve not only the beneficiary but also the donor, as they can help to stop transmission and prevent the disease from becoming endemic, their willingness to donate may expand.

While the results look promising for funding global vaccination campaigns, they should be generalised with caution. Individuals' willingness to donate may differ across countries and may change over time, depending on the pandemic situation. However, our results may represent conservative estimates as international charity research indicates that

citizens of other countries such as Canada, Australia and the US are usually willing to give more than the average German.[10] It should further be noted that the assessment of donation intentions may not be a perfect representation of real-world decision-making. Although intention usually predicts behaviour,[11] social desirability may have affected the participants' answers.

The results support the COVAX initiative with empirical evidence for future fundraising campaigns. The currently very low number of individual donations to the initiative cannot be explained by a low willingness to donate. Instead, most people may not realise that donations are possible at all. In fact, the option to donate has not been advertised, and sending money to a bank outside one's own country may be challenging. As of March 2021, charitable transfers with a donation receipt are only possible for taxpayers in the UK and Canada. Citizens of other countries have to use an international money transfer system. To foster donations, a wider range of payment options should be offered, or national fundraising agencies should be involved in collecting money for COVAX. Furthermore, campaigns should highlight the importance of individual contributions.

Based on the present findings, vaccination sites could be an ideal setting to promote donations. Individuals could be asked to donate money via electronic or digital payment options (e.g., mobile phones) while waiting for or after receiving their vaccination. Information about how many vaccinations can be funded by specific donation amounts (e.g., three shots for 10 EUR) could be displayed as guidance for those willing to contribute. As women and younger participants were more likely to donate larger amounts than men, first advertisements could focus on them.

In conclusion, the COVAX initiative should consider individual contributions as an important pillar of funding, advancing worldwide vaccination and eventually ending the pandemic.

ONLINE SUPPLEMENT

Materials, data, and the data analysis script can be found at
https://osf.io/2qjzw/?view_only=8b8da22c1e3c4765ac852aa211662222

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CONFLICTS OF INTEREST

None declared.

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ETHICAL DECLARATION

Our research obtained ethical clearance from the University of Erfurt's IRB (#20200302/20200501), and all participants provided informed consent prior to data collection.

AUTHOR CONTRIBUTIONS

PS and CB designed the research; PS, LK, SE, RS, and CB performed the research, PS and LK planned and performed data analyses; PS wrote the initial draft, which was revised and approved by all authors.

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